c) collecting said vapor phase stream overhead; and

B1 d) passing said liquid phase stream to a second reaction stage in the presence of a hydrogen-containing treat gas, said reaction stage containing one or more reaction zones operated at aromatics saturation conditions wherein each reaction zone contains a bed of aromatics saturation catalyst, and wherein said hydrogen-containing treat gas is passed through said reaction stage countercurrent to the flow of said liquid phase stream.

REMARKS

Applicants have amended the claims so that it is now clear that the hydrogen treat gas used in the first reaction stage is "once-through" treat gas that originates as counter-flow in the second reaction stage and is cascaded into the first reaction stage. Applicants request that this amendment be entered because this was inferred in the original claims by running the second stage in countercurrent mode and cascading the treat gas to the first reaction stage. Also, this amendment puts the application in better form for allowance or in better form for appeal.

Claims 1-10 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Haun et al. The Examiner argues that Haun et al. teaches a mineral oil conversion process that includes hydrodesulfurization and hydrogenation steps performed in separate reaction zones. The Examiner states that while Huan et al. differ from the instant claims in showing cocurrent flow of hydrogen and hydrocarbons through the reaction zones and a process wherein stripping gas is the vapor phase product from the second reaction stage, the process of Haun et al. is not limited to the manner of operation and hydrogen-rich gas may flow countercurrent to the liquid-phase hydrocarbons through one or more reaction zones.

Also, the Examiner has considered applicants' response to the first office action and believes it is without merit for the reasons set forth in this office action. The Examiner points out that Haun et al. teaches that hydrogen-rich gas may flow countercurrent in to the liquid-phase hydrocarbons through one or more reaction zones.

It is applicants' position that although Haun et al. does teach that countercurrent flow can be used in one or more of the reaction zones, they fail to teach the unexpected benefits of only

using countercurrent flow in the second reaction zone and cascading the hydrogen treat gas to the first reaction zone. This enables the process unit of the instantly claimed invention to be run in once-through treat gas mode. This is not possible with the process of Haun et al. One having ordinary skill in the art reading Haun et al. would not be led to the instantly claimed invention since Haun et al. suggest that running either reaction zones countercurrent would be equal. It is critical to the instantly claimed invention that the second reaction stage be run in countercurrent mode and hydrogen treat gas cascaded from the top of the second reaction stage to the first reaction stage. As previously mentioned, this is not suggested by Haun et al.

Therefore, in view of the above it is applicants' position that the claims, as now amended, define a patentable invention over the cited art. Applicants request that the Examiner withdraw this rejection and pass this application to allowance.

Respectfully submitted:

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Marked-up Clams Accompanying Response to Final Office Action for USSN 09/457,434.

1.(Amended) A two stage process for hydroprocessing a hydrotreated distillate feedstock which process comprises:

a) reacting said feedstock in a first reaction stage in the presence of a once-through hydrogen-containing treat gas cascaded from the second reaction stage herein, said first reaction stage containing one or more reaction zones operated at hydrodesulfurization conditions wherein each reaction zone contains a bed of hydrotreating catalyst;

b) passing the resulting reactant to a separation zone wherein a vapor phase stream and a liquid phase stream are produced;

c) collecting said vapor phase stream overhead; and

d) passing said liquid phase stream to a second reaction stage in the presence of a hydrogen-containing treat gas, said reaction stage containing one or more reaction zones operated at aromatics saturation conditions wherein each reaction zone contains a bed of aromatics saturation catalyst, and wherein said hydrogen-containing treat gas is passed through said reaction stage countercurrent to the flow of said liquid phase stream.